

04-18-02 /

1638

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

#3
4/23/02

In re Application of:



Green et al.

Group: 1638

Serial No. 09/981,124

Examiner: Unassigned

Filing Date: October 17, 2001

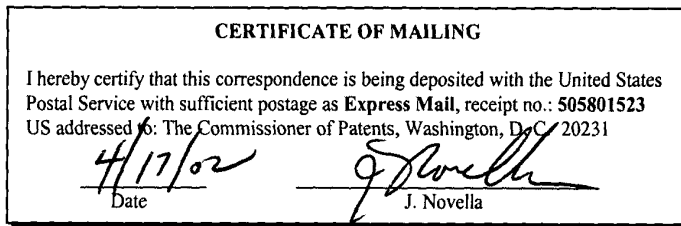
Conformation No.: 9503

For: FATTY ACID EPOXYGENASE GENES FROM PLANTS AND USES THEREFOR IN MODIFYING FATTY ACID METABOLISM

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INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
Washington, DC 20231



Sir:

This application is a continuation in part of USSN 09/059,769, filed April 14, 1998, which claims benefit of priority under Title 35, U.S.C. §119 from Australian Patent Application No. P06223 filed on April 15, 1997 and Australian Patent Application No. P06226 filed on April 15, 1997, and which also claims benefit of priority under Title 35, U.S.C. §119(e) from USSN 60/043,706 filed on April 16, 1997 and from USSN 60/050,403 filed on June 20, 1997. USSN 09/059,769 issued as U.S. Patent No. 6,329,518 on December 11, 2001.

For the Examiner's convenience, a Form PTO1449 listing references cited by applicants and the Examiner in these cases are enclosed. In compliance with the duty of disclosure

set forth in 37 CFR 1.97, the Examiner is referred to the files of USSN 09/059,769 (now United States Patent No. 6,329,518) for prior art of record. In addition, please find enclosed copies of new references: numbers 1,4,5 and 17-21 as listed on Form PTO 1449.

The references and information provided herewith are cited in a spirit of forthrightness and cooperation to enable Applicants to obtain that measure of protection for the invention to which there is entitlement. However, no representation is made that the listed art actually qualifies as prior art under the patent statute and the mere use of Form PTO 1449 is not an admission that all listed references are prior art. No representation is made that Applicants know of the best art.

References listed in the Form PTO 1449 submitted herewith which do not specify the month of publication have a year of publication sufficiently earlier than the effective US filing date and any foreign priority date so that the particular month of publication is not in issue.

It is believed that this submission does not require the payment of any fees. If this is incorrect, however, please charge any requisite fees to Deposit Account No. 07-1969.

Respectfully submitted,



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Reg. No. 33,878

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Attorney docket No. 26-98A
jcn: April 17, 2002



Form PTO 1449		
ATTY DOCKET NO. 26-98A	SERIAL NO. 09/981,124	FILING DATE October 17, 2001
APPLICANT Green et al.		GROUP 1638

U.S. PATENT DOCUMENTS

Exmr. Initial	Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
1	6,329,518 B1	12/11/01	Green et al.	536	23.6	

FOREIGN PATENT DOCUMENTS

Document Number	Date	Country	Class	Subclass	Translation Yes/No
2	WO 89/05852	PCT	C12N	9/22	
3	WO 97/37033	PCT	C12P	7/64	
4	WO 97/37033	PCT	C12P	7/64	
5	WO 96/10074	PCT	C12N	5/00	

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OTHER PRIOR ART (including Author, Title, Date, Pertinent Pages, etc.)

6	Bafor et al. (1993) "Biosynthesis of vernoleate (<i>cis</i> -12-eposyoctadeca- <i>cis</i> -9-enoate) in microsomal preparations from developing endosperm of <i>euphorbia lagascae</i> " <i>Archives of Biochemistry and Biophysics</i> 303(1):145-151.
7	Banas et al. (February 1997) In: Williams, J.P., Mobasher, K.U., Lem, N.W. (Eds) <i>Physiology, biochemistry and molecular biology of plant lipids</i> . Kluwer Academic Publisher, Dordrecht. In press. "Biosynthesis of an Acetylenic Fatty Acid in Microsomal Preparations From Developing Seeds of <i>Crepis Alpina</i> " pp. 57-59.
8	Blee et al. (1993) "Regio-and stereoselectivity of cytochrome P-450 and peroxygenase-dependent formation of CIS-12,13-epoxy-9(<i>Z</i>)-octadecenoic acid (vernolic acid) in <i>euphorbia lagascae</i> " <i>Biochemical and Biophysical Research Communications</i> 197(2):778-784.
9	Blee et al. (1993) "Mechanism of reaction of fatty acid hydroperoxides with soybean peroxygenase" <i>The Journal of Biological Chemistry</i> 268(3):1708-1715.
10	Blee and Schuber (1990) "Efficient epoxidation of unsaturated fatty acids by a hydroperoxide-dependent oxygenase" <i>The Journal of Biological Chemistry</i> 265(22):12887-12894.
11	Bozak et al. (1990) "Sequence analysis of ripening-related cytochrome P-450 cDNAs from avocado fruit" <i>Proc. Natl. Acad. Sci. USA</i> 87:3904-3908.



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ATTY DOCKET NO. 26-98A	SERIAL NO. 09/981,124	FILING DATE October 17, 2001
APPLICANT Green et al.		GROUP 1638

	12	Dolferus et al. (1994) "Differential Interactions of promoter elements in stress responses of the <i>arabidopsis adh</i> gene" <i>Plant Physiol.</i> 105:1075-1087.
	13	Engeseth and Stymne (February 1996) "Desaturation of oxygenated fatty acids in <i>lesquerella</i> and other oil seeds" <i>Planta</i> 198:238-245.
	14	Needleman and Wunsch (1970) "A General method applicable to the search for similarities in the amino acid sequence of two proteins" <i>J. Mol. Biol.</i> 48:443-453.
	15	Shanklin et al. (1994) "Eight histidine residues are catalytically essential in a membrane-associated iron enzyme, stearoyl-coa desaturase, and are conserved in alkane hydroxylase and xylene monooxygenase" <i>Biochemistry</i> 33:12787-12794.
	16	Valvekens et al. (1988) " <i>Agrobacterium tumefaciens</i> -mediated transformation of <i>arabidopsis thaliana</i> root explants by using kanamycin selection" <i>Proc. Natl. Acad. Sci. USA</i> 85:5536-5540.
	17	Capdevila, J.H., et al., "Cytochrome P-450 arachidonate oxygenase" (1990) <i>methods in enzymology</i> 187:385-394
	18	Christian, M.F. and Yu, S.J., "Cytochrome p-450-dependent monooxygenase activity in the velvetbean caterpillar, <i>antarsia gemmatilis hubner</i> " (1986) <i>Comparative Biochemistry and Physiology</i> 83C(1):23-27
	19	Romero, M.F. et al., "An epoxygenase metabolite of arachidonic acid 5,6 epoxy-eicosatrienoic acid mediates angiotensin-induced natriuresis in proximal tubular epithelium" (1991) <i>Advances in Prostaglandin, Thromboxane and Leukotriene Research</i> 21:205-208
	20	Laethem, R.M. et al., "Epoxidation of C ₁₈ unsaturated fatty acids by cytochromes P450C2 and P450CAA" (June 1996) <i>Drug Metabolism and Disposition</i> 24(6):664-668
	21	Lee, M. et al., Identification of non-heme diiron proteins that catalyze triple bond and epoxy group formation" (May 8, 1998) <i>Science</i> 280:915-918
	22	Van de Loo, F.J. et al., "An oleate 12-hydroxylase from <i>ricinus communis</i> l. is a fatty acyl desaturase homolog" (July 1995) <i>Proc. Natl. Acad. Sci. USA</i> 92:6743-6747

EXAMINER	DATE CONSIDERED
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	